Anales del Jardín Botánico de Madrid 82 (2)
July-December 2025, e165
ISSN-L: 0211-1322, eISSN: 1988-3196
https://doi.org/10.3989/ajbm.629

Traditional knowledge of medicinal plants in Yeşilli (Mardin, Turkey)

Yeter YEŞIL
https://orcid.org/0000-0002-4458-7881
Faculty of Pharmacy, Department of Pharmaceutical Botany, Istanbul University, Fatih, 34116 Istanbul, Türkiye
Correspondence: yesily@istanbul.edu.tr

Bahattin YILMAZ
https://orcid.org/0009-0009-6042-5506
Faculty of Pharmacy, Department of Pharmaceutical Botany, Istanbul University, Fatih, 34116 Istanbul, Türkiye

Abstract. The Province of Mardin, located in Upper Mesopotamia on the old Silk Road, has hosted 30 civilizations and the amalgamation of various languages and religions. The District of Yeşilli, in Mardin Province, is an important region that shares this cultural richness. The aim of this ethnobotanical study, the first in the district, was to record the plants used for medicinal purposes by the residents of Yeşilli and to achieve which are also used for food purposes. The fieldwork to document the traditional knowledge of plants was carried out in Yeşilli District from March 2017 to April 2022. The data were collected by interviewing 82 informants. Additionally, the data were analyzed based on the Use Value (UV) and Informant Consensus Factor (ICF) to determine both the cultural significance and the knowledge of medicinal plants among the informants. A total of 83 taxa belonging to 34 families were identified in the region. The majority of remedies were prepared by infusion and decoction. Aerial parts were the most frequently used plant parts. The utilization of medicinal plants is still widespread among the residents of Yeşilli. Given the cultural diversity of the region, this study is of invaluable significance for future ethnobotanical and ethnopharmacological research.

Keywords. Anatolia, ethnobotany, Mardin, Mesopotamia, medicinal plants, traditional knowledge.

Resumen. La provincia de Mardin, situada en la Alta Mesopotamia, en la antigua Ruta de la Seda, ha acogido 30 civilizaciones y la amalgama de varias lenguas y religiones. El distrito de Yeşilli, en la provincia de Mardin, es una región importante que comparte esta riqueza cultural. El objetivo de este estudio etnobotánico, el primero en el distrito, fue registrar las plantas utilizadas con fines medicinales por los residentes de Yeşilli y conocer cuáles de ellas son usadas con fines alimentarios. El trabajo de campo para documentar el conocimiento tradicional de las plantas se llevó a cabo en el distrito de Yeşilli desde marzo de 2017 hasta abril de 2022. Los datos se recopilaron entrevistando a 82 informantes. Además, los datos se analizaron en función del Valor de Uso (UV) y el Factor de Consenso de los Informantes (FIC) para determinar tanto el significado cultural como el conocimiento de las plantas medicinales entre los informantes Se identificaron en la región un total de 83 taxones pertenecientes a 34 familias. La mayoría de los remedios se prepararon mediante infusión y decocción. Las partes aéreas de la planta fueron las más utilizadas. El uso de plantas medicinales todavía está muy extendido entre los habitantes de Yeşilli. Dada la diversidad cultural de la región, este estudio es de inestimable importancia para futuras investigaciones etnobotánicas y etnofarmacológicas.

Palabras clave. Anatolia, etnobotánica, conocimiento tradicional, Mardin, Mesopotamia, plantas medicinales.

How to cite this article: Yeşil Y. & Yılmaz B. 2025. Traditional knowledge of medicinal plants in Yeşilli (Mardin, Turkey). *Anales del Jardín Botánico de Madrid* 82: e165. https://doi.org/10.3989/ajbm.629

Title in Spanish: Conocimiento tradicional de las plantas medicinales en Yeşilli (Mardin, Turquía)

Associate editor: Manuel Pardo-de-Santayana. Received: 30 July 2024; accepted: 3 May 2025; published online: 22 January 2026.

INTRODUCTION

Medicinal plants have been used in many countries around the world for thousands of years, and represent the most ancient form of medication. Knowledge of the effects of medicinal plants has been transmitted over the centuries through the rich experience of healers, ancestral heritage, healer-to-healer transmission, or personal experience over time (Khan & al. 2014). Approximately 7% of the 350, 000 vascular plant species currently described are considered medicinal (25,791 species; RBG Kew 2020). According to the World Health Organization, it is estimated that 70–95% of the population in developing countries rely on traditional, mainly plant-based, medicines for primary healthcare (Robinson & Zhang 2011). This rich ethnobotanical knowledge is not limited to these countries, since for instace, a recent review study documented 1,376 species of wild vascular plants traditionally used for medicinal purposes in Spain, with a total of 160 species (14%)

being endemic (Mateo-Martín & al. 2023). Besides, some Research also shows that COVID-19 has increased the importance and use of medicinal plants and healthy foods. In this context, medicinal plants, and food medicines are an essential tool for communities to maintain their health and holistic well-being (Pieroni & al. 2020; Vandebroek & al. 2020).

Ancient Mesopotamia, often regarded as the cradle of the earliest civilizations in history, encompasses a vast region that includes much of modern-day Iraq, Eastern Syria, Western Iran and Southeastern Turkey. The influence of the great Mesopotamian civilizations such as the Sumerians, Akkadians, Babylonians and Assyrians remains evident across these areas (Leick 2002). Mesopotamian played a pivotal role in the transition to agriculture. Besides, some of the earliest written records of medicinal plants use are Mesopotamian clay tablets dated around 2000 BC that refer the medicinal uses of liquorice, turmeric or many other herbs (Scurlock 2014).

Unfortunately, in the region of ancient Mesopotamia, which has such an important history, there is much migration today due to political processes, and ethnobotanical knowledge is in danger of being forgotten. Despite these, a study by Sulaiman et al. (2022) in Syria showed that the use of wild food plants has increased during the conflict compared to the pre-conflict period, thus reinforcing the idea that ethnobotanical knowledge enhances community resilience in scarcity times, promoting both food and health security, and overall well-being. Moreover, a study in the Nineveh Plain (northern Iraq) shows that ethnobotanical research can contribute to wider environmental sustainability and cultural heritage projects, particularly in post-conflict situations (Osterhoudt & al. 2024).

The Southeastern Anatolia region of Turkey is located in north of ancient Mesopotamian. It includes, the Karacadağ region of Southeastern Anatolia, one of the few areas where einkorn wheat (*Triticum monococcum* L.) grows wild in Anatolia (Harlan 1967). Additionally, Göbekli Tepe, the world's oldest known temple complex, is located in this region and sheds light on the prehistoric periods of Mesopotamia (Clare 2020).

Turkey has exceptional biodiversity due to its geographical location, climate, water resources, and diverse geomorphological features. The flora of Turkey contains approximately 11,700 taxa, about 35% of these taxa are endemic (Güner & al. 2012, 2018; Güner 2014). Folk medicine studies have gradually developed in Turkey since the founding of the Republic in 1923 (Baytop 1999). However, more systematic ethnobotanical studies have been initiated since the mid-1990s (Ertuğ 2014). According to Yeşilada (2013), 13% (1500) of these taxa are used medicinally. A recent dissertation aimed at creating an ethnobotanical database of Turkey reported the medicinal use of 1900 taxa (Bellikci Koyu 2020). The Southeastern Anatolia Region of Turkey recorded the lowest number of medicinal taxa (664). This has been attributed to the fact that it is the region in Turkey with the fewest ethnobotanical studies conducted (Günbatan & al. 2023).

Therefore, the aim of this study is to reveal the traditional knowledge about medicinal plants in Yeşilli District (Mardin Province) in the Southeastern Anatolia Region. The study focused on determining the traditional knowledge of medicinal plants, evaluating the plant usages of the different ethnic groups in the region, comparing the obtained ethnomedicinal data with those of nearby regions in Turkey and in neighboring countries, and uncovering new ethnomedicinal uses of plants.

MATERIAL AND METHODS

Description of the study area

The study was conducted in Yeşilli District (Mardin Province) located in the Southeastern Anatolian region, northeast of the city of Mardin (37°20′20.95″N and 40°49′20.81″E) (Fig. 1). Yeşilli covers an estimated area of 20,000 ha and lies in the transition area from the Taurus Mountains range (surrounding Southeastern Anatolia) to the Mesopotamian plains. The elevation is 700–1100 m and the climate is continental Mediterranean, with rains occurring in spring and autumn and an average annual precipitation of around 430 mm. The temperature drops to 8ºC in winter and rises to an average of 40ºC in July. The total population of Yeşilli is 14,906 (Yeşilli Municipality 2025). The district consists of five urban settlements and nine rural settlements. Mardin Province is one of the multicultural regions of Turkey, and Yeşilli reflects this sociological structure. Christians and Muslims live together in Yeşilli and four languages are spoken in the study área: Turkish (official language), Kurdish, Arabic and Syriac. The majority of the population in the district

centre is Arabic and speaks Arabic, Turkish and Kurdish. Yeşilli District has one Christian village, Bülbül where people speak Arabic, Kurdish and Syriac in their daily lives. Kurds live in the other eight villages, and they speak Kurdish, Turkish and occasionally Arabic.

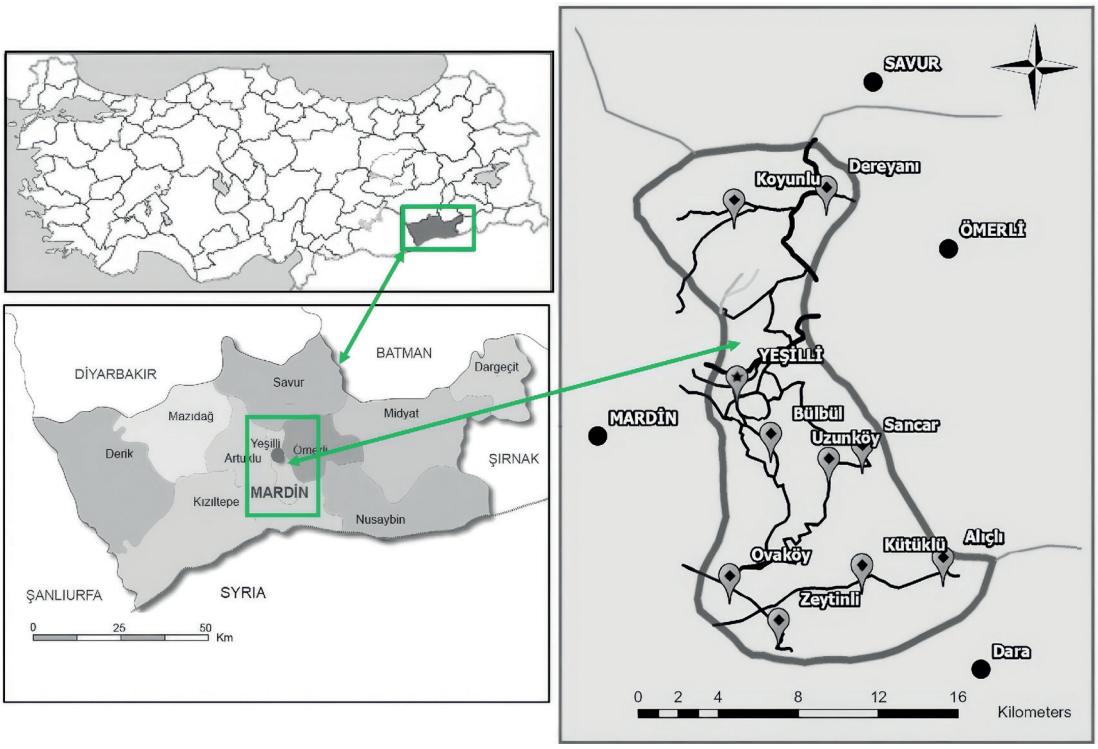

Fig. 1. Geographical location of the study area in Turkey.

Yeşilli's former name was Rışmıl, and it was named Yeşilli [which means "with green" in Turkish] because it is the most horticultural district in Mardin Province. There are degraded shrubs and sporadic oak trees in the higher parts of the district, while in the wetlands of Dereyanı village poplar trees are cultivated. The central town and their surrounding villages are quite diverse in terms of cultivated plants, being fig, plum, cherry, pomegranate, almond and mahaleb trees the predominant species. Vineyards are found on the valley slopes and in the nearby villages (Figs. 2, 3). Grains and legumes are grown primarily in the district's plain, being wheat, barley, and lentils the main cultivated species.

Fig. 2. General View of Uzunköy Village.

Fig. 3. General View of Flora of Yeşilli.

Field study

We conducted face-to-face interviews between March 2017–April 2022 and online interviews in summer 2021. Before conducting the survey, the local community was informed and their permission was obtained. Village headmen, teachers and imams (Muslim ministers) guided us. The interviews were conducted in houses, village common areas and fields. Also, we conducted online interviews with local people to overcome the restrictions due to the Covid pandemic in 2021. A total of 82 informants were interviewed, 52 females and 30 males with knowledge and experience in traditional folk medicine (Table 1). The percentage of informants is also as follows: 50% Kurds, 38% Arabs and 12% Assyrians. During the interview people were asked about the medicinal plants used in the area, what diseases are treated, and how they were prepared.

Table 1. Demographic characteristics of interviewed informants in the study area (Yeşilli, Turkey).

Category	Subcategory	Number
Age	8–16	3
	16–30	6
	30–41	8
	41–50	13
	51–60	25
	61–70	19
	≥71	8
Education level comleted	None	24
	Primary	31
	Secondary	23
	Post-secondary	4
Residential status	Villages	59
	City	23
Employment status	Housewife	39
	Farmer	14
	Local healers	11
	Shepherds	9
	Teachers	4
	Students	3
	Imam	2
Total		82

A total of 132 plant specimens were collected during the field studies. These plants were identified using 'Flora of Turkey and the East Aegean Islands' (Davis 1965–1985; Davis & al.1988; Güner & al. 2000), 'A Checklist of the Flora of Turkey (Vascular Plants)' (Güner & al. 2012) and 'Illustrated Flora of Turkey Volume 1 (Güner 2014)-Volume 2 (Güner & al. 2018). The specimens were kept in the Herbarium of the Faculty of Pharmacy, University of Istanbul (ISTE). The scientific names of species were recorded according to POWO (Plants of the World Online; POWO 2025).

Informant Consensus Factor

The Informant Consensus Factor (ICF) was originally developed by Trotter & Logan (1986). The ICF was calculated with the following formula:

$$ICF = \frac{N_{ur} - N_t}{N_{ur} - 1}$$

where N_{ur} = number of use reports in each category, and N_t = number of used species in the category. The ICF value was used to determine whether there was a consensus among the informants in the study area about the use of plants for each ailment category. This shows the homogeneity of the ethnobotanical knowledge. ICF values range from 0 to 1. A high value indicates that informants are in agreement on the use of taxa for a category of illness. A low value indicates that plants are chosen randomly, or that informants do not exchange information about their uses (Heinrich 2000) (Appendix 1).

Use-value

The Use-value (UV) was originally developped by Phillips & Gentry (1993) and later modified by Thomas *et al.* (2009) and was calculated with the formula:

$$UV = \frac{\sum U_{is}}{N},$$

where Uis = number of use reports cited by each informant (i) for a given plant species (s) and N = total number of informants interviewed. The UV index is the average number of use-categories for a certain plant per informant. Use values are high when many people mention uses for this species and there are many usereports, being the maximum value the total number of use categories, and close to 0 when there are few reports of the use of the species.

Jaccard's Similarity Index

A Venn diagram was drawn based on the medicinal taxa used by the three ethnic groups (Assyrians, Kurds and Arabs) and the related Jaccard Similarity Index for each pairing of the considered communities was calculated. Jaccard's similarity index considers the similarity between two OTUs (operational taxonomic units, ethnic groups in this study) as the number of attributes (medicinal taxa in this study) shared divided by the total number of attributes present in either of the OTUs. Jaccard's index may be expressed as follows:

$$J = \frac{C}{A + B},$$

where, A is the number of taxa recorded in ethnic group a, B is the number of taxa recorded in ethnic group b, and C is the number of taxa recorded in both ethnic groups. The number of taxa recorded in either of the ethnic groups is represented by A + B (Jaccard 1908).

RESULTS AND DISCUSSION

Medicinal plant diversity, most represented species and used plant parts

Appendix 1 lists the 83 medicinal plants and one lichen (59 wild and 24 cultivated) used in Yeşilli District in alphabetical order by family and species name, their local names, uses, parts used, preparation methods, the diseases they were used to treat, the UV and the previous ethnobotanical literature records in nearby area and close ethnic cultures. They belong to 68 genera within 35 families, which are used for the treatment of 13 different categories of ailments. Most of these taxa were herbs (46), although there were a considerable number of trees (21) and shrubs (16). Twenty families were represented by just one taxon, while the other 16 families were represented by two or more taxa. The predominant families were Rosaceae (13 taxa), Asteraceae (7), Apiaceae (6), Lamiaceae (6), Moraceae (5), Brassicaceae (4), and Cucurbitaceae, Fabaceae, Malvaceae and Salicaceae (3) (Fig. 4). The top four families were found to also be predominant among the medicinal plants used in folk medicine in Eastern Anatolia. This is not surprising because many of the medicinal taxa in eastern Turkey belong to those plant families (Behçet & Arık 2013; Mükemre & al. 2015; Polat 2019; Karakaya & al. 2020; Doğan 2024).

The plants with the highest use values are *Arum rupicola* Boiss. (UV = 0.82), *Glycyrrhiza glabra* L. (0.68), *Anchusa strigosa* Banks & Sol. (0.59), *Hypericum triquetrifolium* Turra (0.58), *Quercus brantii* Lindl. (0.56), *Malva neglecta* Wallr. (0.55), *Malva nicaeensis* All. (0.54), *Mentha longifolia* (L.) L. (0.53), *Achillea santolinoides* Lag. (0.52), *Teucrium polium* L. (0.51), *Mentha* × *piperita* L. (0.50), and *Allium sativum* L. (0.48). The lowest use value was found for *Trigonella* sp. (0.01) and *Geocaryum macrocarpum* (Boiss. & Spruner) Engstrand (0.02) (Appendix 1). Ethnobotanical studies carried out in nearby areas show that *Arum rupicola*, *Glycyrrhiza glabra*, *Hypericum triquetrifolium*, and *Allium sativum* species are among the plants used intensively in this region. (Kılıç & al. 2020; Khatib & al. 2021; Yeşil & İnal 2021).

The most frequently used medicinal plant parts for treatment of ailments were fruits (28 species), aerial parts (21), leaves (15) and seeds (12). Other less frequently used plant parts were whole parts (9), flowers (8), roots (6), stems (4), fruit stalks (4), cormus (2), bulbs (2), tubers (1), branches (1), resin (1) and latex (1) (Fig. 5).

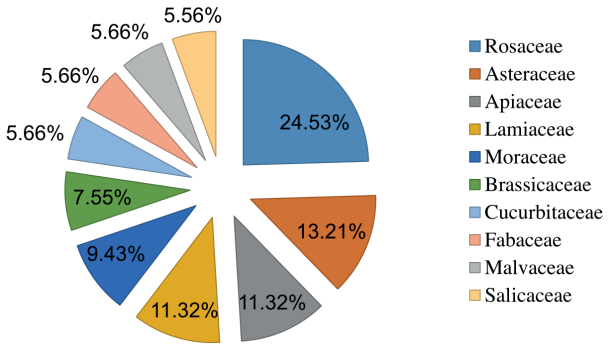

Fig. 4. The Predominant Families Used for Medicinal Purposes in Yeşilli.

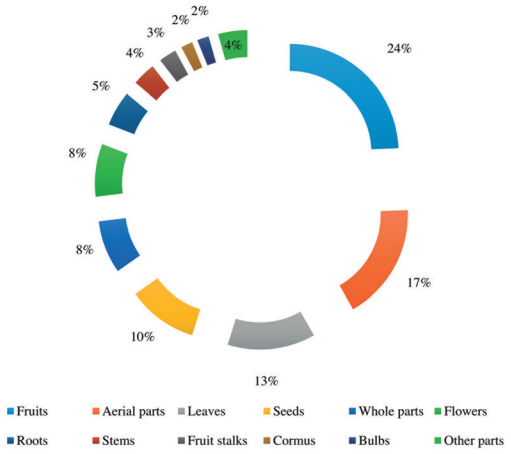

Fig. 5. Plant Part Used for Medicinal Purposes in Yeşilli.

Drug preparations and drug activities

The most common treatments were in the form of infusion (28% of species), decoction (25%) and fresh application (22%). These results align with studies conducted in Eeastern Turkey and neighbouring countries (Yeşil & Akalın 2009; Polat & al. 2013; Kaval & al. 2014; Kılıç & al. 2020; Demir & Demir 2022; Ahmed 2024). The most common administration methods for the preparations were internal (55), eaten (30) and external (21) (Appendix 1).

The dosage or frequency of use of the plants was often not specified. However, it was noted that caution was necessary when using toxic plants such as *Ecballium elaterium* (L.) A.Rich, *Arum rupicola*, and *Hyoscyamus albus* L. The leaves of *Arum* species are used as food after a variety of detoxification techniques, especially boiling combined with discarding the water and adding other acidic plants; such as sumac fruits (*Rhus coriaria* L.), sorrel leaves (*Rumex* sp.), pomegranate (*Punica granatum* L.), or lemon juice [*Citrus* × *limon* (L.) Osbeck] (Łuczaj & Emre 2025). The dish prepared from the detoxified leaves of *Arum rupicola* using *Rhus coriaria* fruits is consumed for medicinal purposes in the study area. The medicinal use of the dish prepared through this detoxification method has been indicated in previous studies (Pieroni & al. 2017; Pieroni & al. 2018; Yeşil & Inal 2019; Yeşil & al. 2019; Kadıoğlu & al. 2020; Kılıç & al. 2020; Yeşil & Inal 2021). Also, local people stated that the prepared infusion of *A. rupicola* leaves and *R. coriaria* fruits was used internally as a remedy three times a day (Fig. 6).

Informants stated that other ingredients, such as molass, honey, milk, breast milk, yogurt whey, salt or lemon were used to prepare remedies. For instance, breast milk was added to the dried, powdered fruit of *Papaver glaucum,* a usage not reported before. Also, grape molass was added to the crushed fruits of *Celtis tournefortii* Lam. to treat headache and dizziness and it is as immunostimulant, especially during the winter. Yogurt whey was boiled with the fruits of *Hordeum vulgare* L., consuming the resultant mixture within 24 hours facilitated the passing of kidney stones.

Fig. 6. The leaves of *Arum rupicola*.

Both the smoke produced by heating the seeds of *Hyoscyamus albus* and the mixture obtained by crushing the seeds and combining them with breast milk were applied against earaches. The same uses were recorded in studies conducted in nearby regions (Kılıç & al. 2020; Yeşil & İnal 2021). Inhaling the smoke from *Hyoscyamus* species seeds or fruits of is a common remedy in Anatolia for toothaches (Mosaddegh & al. 2012; Tuzlacı 2016; Karakaya & al. 2019; Nadiroğlu & al. 2019; Polat 2019) and in someother parts of the world (Parada & al. 2009; Tuttolomondo & al. 2014; Suman & Dhatwalia 2024; Wang & al. 2024). In Anatolia, it is equally common to inhale the smoke through the mouth and nose to kill the worms in the throat (Yeşil & Akalın 2009; Özüdoğru & al. 2011; Tuzlacı 2016; Doğan 2024).

Furthermore, *Achillea arabica* Kotschy, *Papaver glaucum* and *Prunus persica* (L.) Batsch are mixed with breast milk and used as carminative, painkiller, for child development and earache. The use in nearby regions of *Prunus persica* mixed with breast milk has been previously reported (Yeşil & İnal 2021). However, the use of *Achillea arabica* and *Papaver glaucum* mixed with breast milk does not appear in any studies conducted in nearby regions.

Plant mixtures are also used in the area. A decoction prepared with the aerial parts of *Hypericum triquetrifolium*, *Eryngium creticum* Lam. and *Urtica dioica* L. was used at a dosage of one teacup per day as an anticancer and as an anti-inflammatory and positive effects have been reported. Also, an infusion prepared from the aerial parts of *Teucrium polium* and the leaves of *Prunus mahaleb*, *Juglans regia* L., *Platanus orientalis* L., *Paliurus spina-christi*, and *Mentha longifolia* was used to treat shortness of breath and as an antitussive. Additionally, the gums of *Prunus mahaleb* and *Prunus amygdalus* Batsch were mixed with honey and used internally to treat stomachaches, stomach bleeding and torn muscles.

The uses of *Onopordum* species as a demulcent and cholagogue to treat stomach disorders, hemorrhoids, embolisms, diabetes, urinary disorders, abdominal pains, diarrhea and hepatic diseases have been documented in previous studies (Çakılcıoğlu & al. 2011; Polat & al. 2013; Arasan & Kaya 2015; Mükemre & al. 2015; Polat & al. 2019; Demir 2020; Hosseini & al. 2021; Demir & Demir 2022). However, this study includes the first documented use of *Onopordum illyricum* L. subsp. *illyricum* for anaemia (Fig. 7).

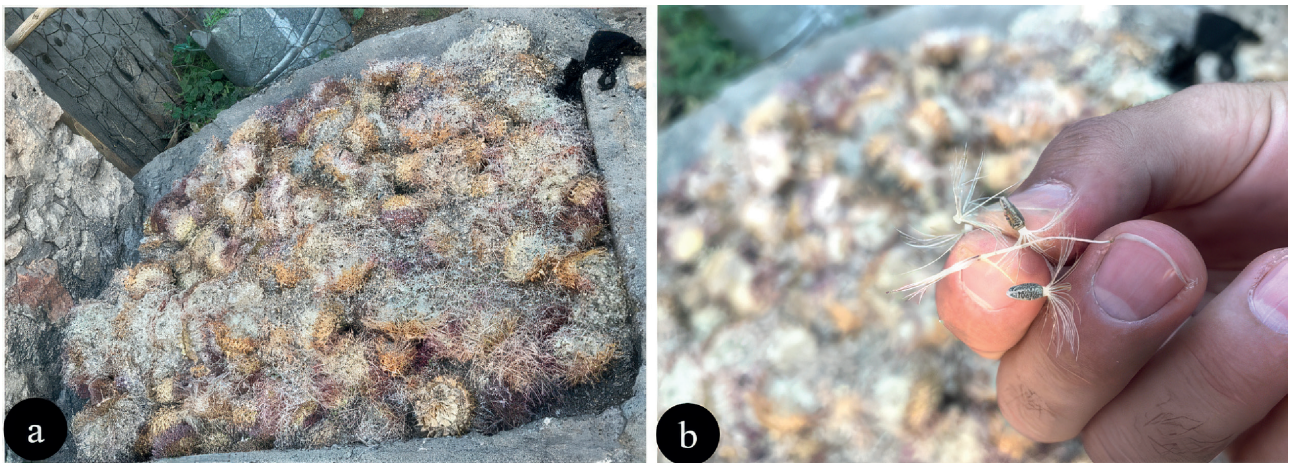

Fig. 7. The collected capitula (**a**) and fruits (**b**) of *Onopordum illyricum* subsp. *illyricum*.

Ailments categories and their ICF values

Based on the data obtained, the ailments were grouped into 13 categories (Table 2). Respiratory disorders have the highest ICF value (0.81) among these categories. The following species are the most used for respiratory disorders: *Mentha longifolia* (UV = 0.53), *Mentha piperita* (0.50), *Alcea setosa* (Boiss.) Alef. (0.42), *Rosa canina* L. (0.35), *Thymbra sintenisii* Bornm. & Azn. (0.32) and *Thymbra spicata* L. (0.33). The ailment category with the second highest ICF value (0.78) was the digestive system. *Glycyrrhiza glabra* (0.68), *Pistacia terebinthus* L. (0.29), *Punica granatum* (0,13), *Ficus carica* L. (0.12) and *Prunus armeniaca* L. (0.11) were used for this category. The other ailment categories based on their ICF values were: urogenital system (0.72), dermatological system (0.71), snakebite, scorpion sting, and mouse and fly bites (0.67), endocrine system (0.64) and ear disorders (0.63). In a previous ethnobotanical study conducted in the region, it was reported that respiratory and digestive system disorders had highest ICF values (Kaval & al. 2014).

Tabla 2. Categories of ailments and associated Informant Consensus Factor (ICF) values.

Category of Ailments	No. of taxa	No. reports	ICF Value
Respiratory system	28	141	0.81
Digestive system	34	148	0.78
Urogenital system	17	58	0.72
Dermatological system	7	22	0.71
Scorpion sting, snakebite, mouse and fly bites	2	4	0.67
Endocrine system	20	54	0.64
Ear disorders	4	9	0.63
Immunostimulant, child development, refreshment, antifatigue	10	13	0.25
Circulatory system/cardiovascular	13	15	0.14
Anticancer	8	9	0.12
Nervous system	10	11	0.1
Musculoskeletal system	19	20	0.05
Dental and oral	2	2	0.00

Edible plants with medicinal uses

Homemade plant-based beverages and foods are an important part of the folk medicine repertoire that communities in many cultures rely on to treat minor, infectious and chronic illnesses (Pieroni & Price 2006). This study shows that 73% of plants used for medicinal purposes are also used for food. *Arum rupicola* is an important plant that was used as food and medicine. This plant was eaten as food for its medicinal effect. *Anchusa strigosa* is another edible plant in the study area and surrounding region (Akgül & al. 2018; Yeşil & al. 2019; Yeşil & İnal 2021). It was also cooked and eaten as food for medicinal purposes.

The seeds of *Quercus brantii* are eaten, raw or cooked in embers as food (Mason & Nesbitt 2009; Yeşil & al. 2019). *Thymbra sintenisii* and *Thymbra spicata* are used as spices in the study area (Yeşil & al. 2019). These species are also used as food and medicine in the surrounding regions (Ahmed 2024; Akgül & al. 2018; Yeşil & İnal 2019; Kawarty & al. 2020; Kılıç & al. 2020; Yeşil & İnal 2021; Baykan & al. 2023). The cormus of *Gagea villosa* (M.Bieb.) Sweet is eaten raw as food (Yeşil & al. 2019; Balos & al. 2022). However, this study is the first to report the medicinal use of this species in the region. However, the use of *Gagea luteoides* Stapf (syn. *Gagea mesopotamica* Bornm.) species for medicinal purposes was recorded in a study conducted in the city of Mardin and its surrounding areas. Also, the use of *Gagea goekyigitii* Eker & Tekşen, *Gagea luteoides* Stapf, *Gagea dubia* A. Terracc., and *Gagea reticulata* (Pall.) Schult. & Schult.f. as food and forage has been documented (Bozyel & al. 2021).

Local people reported consuming pickles made from wild and cultivated edible plants, including pomegranate syrup and sumac (extensively during the pandemic), teas made from the fruits of *Rosa canina,* aerial parts of *Thymbra* and *Mentha* species and a cold beverage of *Glycyrrhiza glabra*. Also, a gargle of *Rhus coriaria* was used for mouth cleaning.

Traded Plants

In addition to rich plant diversity and intensive plant utilization, the study area features a trade in certain wild medicinal plants. These plants are commonly traded in the study area and the surrounding provinces: *Cuscuta babylonica* Aucher ex Choisy*, Glycyrrhiza glabra*, *Hypericum triquetrifolium, Thymbra sintenisii*, *Thymbra spicata, Crataegus azarolus* L. var. *azarolus, Gundelia tournefortii* L.*, Quercus brantii, Arum rupicola, Rhus coriaria* and *Pistacia terebinthus* (Akgül & al. 2018; Kılıç & al. 2020; Yeşil & İnal 2021) (Fig. 8).

Fig. 8. Sale of fruits of *Quercus brantii* and fresh aerial parts of *Gundelia tournefortii* (a), fruits of *Pistacia terebinthus* in Yeşilli (b).

Cuscuta babylonica is a parasitic plant sold in the city of Mardin for its therapeutic properties. It is used in the study area to treat icterus, cardiac diseases, shoulder pain, cold and especially as a galactagogue. A study conducted close to our study area recorded that this plant was used for hepatitis, cardiac diseases and as appetizer (Kılıç & al. 2020; Yeşil & İnal 2021). Additionally, pharmacological studies on *Cuscuta* species have shown that they are liver protective (Yen

& al. 2007). Studies conducted with *Cuscuta pentagona* Engelm. (syn: *Cuscuta arvensis* Beyr ex Engelm.) extract on mice, found to be analgesic and anti-inflammatory (Koca & al. 2011). *Avasuse* (Liquorice syrup) is a refreshing beverage consumed in the summer and autumn months, obtained by macerating in water the roots of *Glycyrrhiza glabra* (Yeşil & al. 2019), another plant that is collected and sold (Fig. 9). The wine made from the fruits of *Vitis vinifera* L. is of great importance especially for the region besides its medicinal use. Assyrian wine is an important commercial resource for Mardin. Like other Assyrian villages in Mardin, residents in Bülbül village also produces wine for trade. In addition, some medicinal plants are intensively cultivated in the region and used for commercial purposes: *Prunus mahaleb, Prunus amygdalus*, *Olea europaea*, *Punica granatum* and *Vitis vinifera*.

Fig. 9. Man selling liquorice syrup in Mardin center.

Ethnic groups and medicinal plant use

When the data obtained were analysed in terms of ethnic groups, it was found that the use of medicinal plants is more common in villages inhabited by Kurds (86% of the species), then Assyrians (67%) and Arabs (55%). The highest overlap of species used and the Jaccard index (similarity) was between Assyrians and Arabs and the lowest between Arabs and Kurds (Fig. 10). The main reason for the high use of plants among Kurds may be that the villages they live in are geographically isolated and migration rates are low, as the local people continue their traditional livelihoods of animal husbandry and agriculture. The population of the Assyrian community has decreased significantly due to migration. At the same time, it has been observed that the community now speaks very little of their native language due to their proximity to the center of Yeşilli, where the Arab population is dense, and this may have caused a decrease in the transfer of knowledge. This is also the reason why most of the plant names recorded during the interviews in the Assyrian village (Bülbül village) are Arabic. At the same time, the fact that Assyrians and Arabs have the highest common use or similarity index for plants may be due to all these factors. On the other

hand, the interviews conducted in the Yeşilli centre revealed that the number of medicinal plants used by the local population was lower than in other settlements in the district, the main reason for which may be the easy access to health facilities and therefore less use of plants.

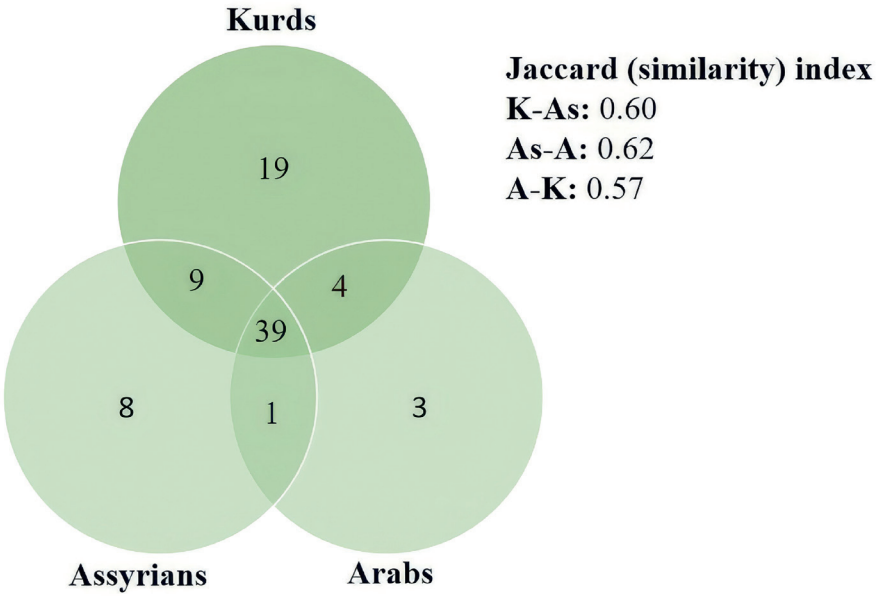

Fig. 10. Overlap in medicinal plants between the three communities studied.

Many of the culturally important taxa are popular among the three ethnic groups; *Arum rupicola, Celtis tournefortii*, *Cota austriaca* (Jacq.) Sch.Bip., *Glycyrrhiza glabra, Gundelia tournefortii, Hypericum triquetrifolium, Juglans regia*, *Mentha longifolia, Paliurus spina-christi*, *Prunus mahaleb*, *Rosa canina, Rhus coriaria*, *Teucrium polium* and *Quercus brantii*. However, other high use value species such as *Anchusa strigosa, Bryonia aspera* Steven ex Ledeb*., Prosopis farcta* (Banks & Sol.) J.F.Macbr. and *Tribulus terrestris* L. were mainly mentioned by Kurds.

Besides, there are species such as *Anethum graveolens* L., *Geocaryum macrocarpum*, *Brassica rapa* L., *Ecballium elaterium*, *Juniperus oxycedrus* L., *Platanus orientalis*, *Rosa foetida* J.Herrm. and *Vitis vinifera* species that are used only by Assyrians. On the other hand, *Morus rubra* L. *Populus nigra* L. and *Prunus cerasus* L. are used only by the Arabs. Most of these plants are cultivated, and have low UV values. The fact that Kurds and Arabs have the lowest similarity indices may be related to the fact that Kurds are more distant from Arabs than Assyrians and to the Kurds' livelihoods.

Beliefs and medicinal plants

Belief in the evil eye is a particularly prevalent tradition in the Mediterranean region. Practices based on ancient beliefs related to this phenomenon continue to be observed throughout Anatolia today (Begiç 2020). During this study, it was observed that medicinal plants are also associated with the evil eye and other beliefs in some villages. The fruits of *Prunus mahaleb* are pierced while still wet and threaded on a string to create a necklace or bracelet that protects children from the evil eye. Residents of Bülbül, the Christian village in the study area, believe that if a person with warts throws the dried fruits of *Paliurus spina-christi* behind their back and walks away without looking back, the warts will disappear.

Other medicinal uses are linked beliefs related to the Doctrine of Signatures. For instance, Christians in Bülbül use the tubers of *Geocaryum macrocarpum* species as a tonic for the brain, based on their brain-like appearance (Yeşil & al. 2019). Some plants, such as *Teucrium polium*, are also believed to possess medicinal properties due to the cross-like

shape of their flowers. Similarly, it has been suggested that the seeds of *Juglans regia* may improve brain health due to its resemblance to the human brain. Additionally, it is believed that if the aerial parts of the *Malva* species, one of the most commonly used plants in the study area, are crushed and applied to the abdomen of a pregnant woman, she will give birth to a beautiful and healthy baby.

Comparison of the obtained data with those of nearby regions

The comparison of the obtained data with 41 studies carried out in nearby regions and neighbouring countries with the same cultural structure is given in Appendix 1. Among these studies, the 11 studies with 17 or more taxa in common with our study, and the similarity percentage and common uses of our data are compared in Table 3. The percentage of similarity varies between 20.98% and 52.12%. The highest similarity was observed in studies conducted in other areas of Southeastern Turkey: Hasankeyf (Batman Province; Yeşil & İnal 2021); Adıyaman (capital of Adıyaman Province; Baykan & al. 2023); and Midyat (Akgül & al. 2018), Savur (Arasan & Kaya 2015) and Artuklu (Kılıç & al. 2020) districts of Mardin Province. The main reasons for this similarity are both the similar flora and the common sociocultural structure and cultural transmission. Artuklu, Savur, Midyat and Yeşilli have the same cultural diversity; Kurds, Arabs and Assyrians live together in these districts. Therefore, it is an inevitable result that the similarity percentages and similar plant uses of the studies conducted in these districts are high. The lowest similarity percentage is observed in the studies conducted in Sivrice (Elazığ Province; Çakılcıoğlu & Türkoğlu 2010) and Hizan (Bitlis Province; Demir 2020), territories with much higher altitudes than the study area and its surroundings, which leads to differences in vegetation.

Table 3. Percentage of similarity of the present study with ethnobotanical studies near the study area.

Compared Study	Location (Province)	No. of informants	Total No. medicinal species	No. common species	Similarity (%)	No. species same uses
Yeşil & İnal 2021	Hasankeyf (Batman)	131	94	49	52.12	26
Arasan & Kaya 2015	Savur (Mardin)	207	96	35	36.45	21
Baykan & al. 2023	Nemrut mountain (Adıyaman)	44	82	34	41.46	18
Kılıç & al 2020	Artuklu (Mardin)	365	85	31	36.47	20
Polat 2019	Bingöl city center	182	93	27	29.03	11
Hayta & al. 2014	Elazığ city center	136	74	26	35.13	13
Abdulwahid-Kurdi & al. 2022	Soran (North Iraq)	171	97	24	24.74	12
Polat & al. 2013	Solhan (Bingöl)	145	82	23	28.04	8
Çakılcıoğlu & Türkoğlu 2010	Sivrice (Elazığ)	176	81	17	20.98	7
Demir 2020	Hizan (Bitlis)	68	71	17	23.94	7
Akgül & al. 2018	Midyat (Mardin)	128	32	17	50	9

As a result of the comparison, it was found that *Brassica rapa*, *Geocaryum macrocarpum*, *Hirschfeldia incana* (L.) Lagr.-Foss., *Gagea villosa*, *Morus rubra*, *Papaver glaucum*, *Populus nigra* L. and *Salix triandra* L. had no medicinal usage records in other studies. On the other hand, *Elaeagnus angustifolia* L., *Ficus carica* subsp. *rupestris* (Hausskn.) Browicz, *Malva nicaeensis*, *Papaver macrostomum* Boiss. & A.Huet and *Salvia multicaulis* Vahl. have also been identified for uses other than those mentioned in the compared literature. Finally, *Hypericum triquetrifolium* is widespread in the region and its use is very common. However, its use for antifatigue, rheumatism and shortness of breath, which are included in this study, has not been reported in the compared literature.

CONCLUSION

In this study conducted in Yeşilli district, 83 plant taxa belonging to 34 families and one lichen were identified. These plants are used in the treatment of a wide range of ailments and most of them are also food plants. Ethnobotanical fieldwork has shown that people living in rural areas have a greater understanding of the use of medicinal plants than those living in urban areas, and that the most common use of plants is in the regions where animal husbandry is practised. This suggests that the use of plants is more widespread within the Kurdish community. Local or rare uses of the taxa *Hirschfeldia incana*, *Gagea villosa, Geocaryum macrocarpum* and *Papaver glaucum* have been identified. These species need further study of their biochemical and biological activities. Yeşilli and its surrounding areas could serve as a starting point for future comparative cross-cultural ethnobotanical studies, which may help expand the existing knowledge of traditional medicinal plants. This study will help preserve the traditional medicinal use of plants in Yeşilli District for future generations, and the findings will provide valuable data for ethnopharmacologists researching the intersection of food and medicine. This research is important for health researchers and practitioners seeking to address the health needs of diverse populations, as it highlights the importance of considering the local context in relation to nutritional practices and the concept of 'healthy' food. Further research is recommended as the promotion of sustainable management of this diversity could enhance the economy and wellbeing of local communities.

ACKNOWLEDGEMENTS

We would like to thank to Mahmut Çelik, Eser Bozan and Hamza Yılmaz for their help with fieldwork, thank to Ferhat Ünlü for the photo of man selling liquorice syrup. We also thank all participants in the survey in Yeşilli District.
This work has been supported by the Istanbul University Scientific Research Projects Department under project TSA-2020-35517.

AUTHORSHIP CONTRIBUTION STATEMENT

Yeter YEŞIL: Carried out fieldwork (from 2017 to 2022), identified the plants (from 2017 to 2022), analyzed the data & wrote the paper-review & editing. Bahattin YILMAZ: Carried out fieldwork (in 2017), identified the plants (in 2017).

REFERENCES

Abdulwahid-Kurdi S.J., Abdulwahid M.J., Magaji U., Aghwan Z.A., Atan R. & Hamadamin K.A. 2022. Medicinal plants used in Soran district Kurdistan region of Iraq, an ethnobotanicals study. *Journal of Pharmacy and Pharmacognosy Research* 11: 1–33.

Ahmad S.A. & Askari A.A. 2015. Ethnobotany of the Hawraman region of Kurdistan Iraq. *Harvard Papers in Botany* 20: 85–9

Ahmed H.M. 2016. Ethnopharmacobotanical study on the medicinal plants used by herbalists in Sulaymaniyah Province, Kurdistan, Iraq. *Journal of Ethnobiology and Ethnomedicine* 12: 8.

Ahmed, H.M. 2024. Ethnopharmacology of medicinal plants used in choman community, Hewler (Erbil), Kurdistan Region, Iraq. *Genetic Resources and Crop Evolution* 71: 2797–2817.

Akan H., & Ayaz H. 2016. Gölpınar Şanlıurfa-Türkiye mesire yeri florası ve etrafındaki köylerin etnobotanik özellikleri. *Bağbahçe Bilim Dergisi* 2: 19–56.

Akan H., Aydoğdu M., Korkut M. M. & Balos M.M. 2013. An ethnobotanical research of the Kalecik mountain area Şanlıurfa, South-East Anatolia. *Biological Diversity and Conservation* 6: 84–90.

Akgül A., Akgül A., Şenol S.G., Yıldırım H., Seçmen Ö. & Doğan Y. 2018. An ethnobotanical study in Midyat (Turkey), a city on the silk road where cultures meet. *Journal of Ethnobiology and Ethnomedicine* 14: 12.

Altundağ, E. 2009. The use of natural plants of Iğdır Province (Eastern Anatolia Region) by the people (in Turkish). PhD Dissertation. Istanbul University Institute of Health Sciences, Department of Pharmaceutical Botany, Pharmaceutical Botany Programme, Istanbul.

Arasan S. & Kaya I. 2015. Some important plant belonging to Asteraceae family used in folkloric medicine in Savur, Turkey area and their application areas. *Journal of Food and Nutrition Research* 3: 337–40.

Bahmani M., Rafieian-Kopaei M., Avijgan M., Hosseini S., Golshahi H., Eftekhari Z. & Gholizadeh G.H. 2012. Ethnobotanical studies of medicinal plants used by Kurdish owner's in South Range of Ilam Province, West of Iran. *American-Eurasian Journal of Agricultural & Environmental Sciences* 12: 1128–1133.

Balos M.M., Akan H. & Geçit M. 2022. An ethnobotanical research on geophytes of Mardin (Turkey). *Journal of Agriculture and Nature* 25: 1287–1304.

Baykan S., Ozturk B., Sahin B. & Senol S.G. 2023. Ethnobotanical study of medicinal plants in Nemrut Mountain, Adiyaman-Türkiye. *Journal of Research in Pharmacy* 27: 2250–2269.

Baytop T. 1999. *Therapy with plants in Turkey: past and present* (in Turkish). Nobel Tıp Kitapevleri, İstanbul.

Begiç H.N. 2020. Amulets from Anatolia: the material culture of the evil eye in Turkey. *Folk Life* 58: 97–114.

Behçet L. & Arık M. 2013. An ethnobotanical investigation in East Anatolia (Turkey). *Turkish Journal of Nature and Science* 2: 1–14.

Bellikci Koyu E. 2020. Ethnobotanical database of Türkiye. PhD dissertation. Ege University, Faculty of Pharmacy, Department of Pharmaceutical Botany, Izmir (Turkey).

Bozyel M.E., Merdamert-Bozyel E., Benek A., Turu D., Yakan M.A. & Canli K. 2021. Ethnobotanical uses of Liliaceae and Colchicaceae taxa in Turkey. *International Journal of Innovative Approaches in Science Research 5*: 163–174.

Bulut G., Biçer M. & Tuzlacı E. 2016. The folk medicinal plants of Yüksekova (Hakkari-Turkey). *Journal of Faculty of Pharmacy of Istanbul University* 46: 115–124.

Bulut G., Doğan A., Şenkardeş İ., Avci R. & Tuzlaci E. 2019. The medicinal and wild food plants of Batman City and Kozluk District (Batman-Turkey). *Agriculturae Conspectus Scientificus* 84: 29–36.

Clare L. 2020. Göbekli Tepe, Turkey. A brief summary of research at a new World Heritage Site (2015–2019). *e-Forschungsberichte* 2: 81–88.

Çakılcıoğlu U. & Türkoğlu I. 2010. An ethnobotanical survey of medicinal plants in Sivrice (Elazığ-Turkey). *Journal of Ethnopharmacology* 132: 165–175.

Çakılcıoğlu U., Khatun S., Türkoğlu I. & Hayta S. 2011. Ethnopharmacological survey of medicinal plants in Maden (Elazig—Turkey). *Journal of Ethnopharmacology* 137: 469–486.

Davis P.H. 1965–1985. *Flora of Turkey and the East Aegean Islands* vol. 1–9, Edinburgh University Press, Edinburgh.

Davis P.H., Mill R.R. & Tan K. 1988. *Flora of Turkey and the East Aegean Islands* vol. 10 (Supplement I). Edinburgh University Press, Edinburgh.

Demir İ. 2020. An ethnobotanical study of medicinal plants used in Hizan District (Bitlis-Turkey). *Yuzuncu Yıl University Journal of Agricultural Sciences* 30: 732–741.

Demir Ü & Demir İ. 2022. Traditional plants used for medicinal purposes in Güroymak (Bitlis/Turkey) District. *Journal of the Institute of Science and Tecnology* 12: 609–621.

Doğan A. 2024. Cultural use and the knowledge of ethnomedicinal plants in the Pülümür (Dersim-Tunceli) Region. *Plants* 13: 2104.

Ertuğ F. 2014. Ethnobotany. *In* Güner A. (ed.), *Illustrated Flora of Turkey* (in Turkish) vol. 1: 319–344. Isbank Culture Publications, İstanbul.

Gençay F. 2007. *Ethnobotanical features of Cizre (Şırnak).* MSc Dissertation. Yüzüncü Yıl University, Department of Biology, Van (Turkey).

Günbatan T., Gürbüz İ. & Gençler Özkan A.M. 2023. Ethnobotany in Turkey: Retrospect and prospect. Medicinal and aromatic plants of Turkey. In Máthé A & Turgut K. (eds.), *Medicinal and Aromatic Plants of Turkey*. pp. 31–55. Springer Nature, Switzerland.

Güner A. (ed.) 2014. *Illustrated Flora of Turkey vol. 1* (in Turkish). Isbank Culture Publications, Istanbul.

Güner A., Özhatay N., Ekim T. & Başer K.H.C. (eds.) 2000. *Flora of Turkey and the East Aegean Islands (Supplement II).* Edinburgh University Press, Edinburgh.

Güner A., Aslan S., Ekim T., Vural M. & Babaç M.T. (eds.) 2012. *A checklist of the Flora of Turkey (Vascular Plants)* (in Turkish). *Nezahat Gökyiğit Botanical Garden and Flora Research Association Publication,* Istanbul.

Güner A., Kandemir A., Menemen Y., Yıldırım H., Aslan S., Ekşi G., Güner I. & Çimen A.Ö. (eds.) 2018. *Illustrated Flora of Turkey* vol. 2 (in Turkish). ANG Foundation Nezahat Gökyiğit Botanical Garden Publications, Istanbul.

Güneş F. & Özhatay N. 2011. An ethnobotanical study from Kars Eastern Turkey. *Biological Diversity and Conservation* 4: 30–41.

Harlan J.R. 1967. A wild wheat harvest in Turkey. *Archaeology* 20: 197–201.

Hayta S., Polat R. & Selvi S. 2014. Traditional uses of medicinal plants in Elazığ (Turkey). *Journal of Ethnopharmacology* 154: 613–623.

Heinrich M. 2000. Ethnobotany and its role in drug development. *Phytotherapy Research* 14: 479–488.

Hosseini S.H., Bibak H., Ghara A.R., Sahebkar A. & Shakeri A. 2021. Ethnobotany of the medicinal plants used by the ethnic communities of Kerman Province, Southeast Iran. *Journal of Ethnobiology Ethnomedicine* 17: 31.

Jaccard P. 1908. Nouvelles recherches sur la distribution florale. *Bulletin de la Société Vaudoise des Sciences Naturelles* 44: 223–70.

Kadıoğlu Z., Cukadar K., Kalkan N.N., Vurgun H. & Kaya O. 2020. Wild edible plant species used in the Ağrı Province, eastern Turkey. *Anales del Jardín Botánico de Madrid* 77: e098.

Karakaya S., Polat A., Aksalak Ö., Sümbüllü Y.Z. & İncekara Ü. 2019. An ethnobotanical investigation on medicinal plants in South of Erzurum (Turkey). *Ethnobotany Research and Applications* 18: 13.

Karakaya S., Polat A., Aksakal Ö., Sümbüllü Y.Z. & İncekara Ü. 2020. Ethnobotanical study of medicinal plants in Aziziye District (Erzurum, Turkey). *Turkish Journal of Pharmaceutical Sciences* 17: 211–220.

Kaval İ., Behçet L. & Çakılcıoğlu U. 2014. Ethnobotanical study on medicinal plants in Geçitli and its surrounding (Hakkâri-Turkey). *Journal of Ethnopharmacology* 155: 171–184.

Kawarty A.M.A.M.A., Behçet L. & Çakilcioğlu U. 2020. An ethnobotanical survey of medicinal plants in Ballakayati (Erbil, North Iraq). *Turkish Journal of Botany* 44: 13.

Kaya Ö.F., Dağlı M. & Çelik H.T. 2020. An ethnobotanical research in Şanlıurfa central district and attached villages (Turkey). *Indian Journal of Traditional Knowledge* 19: 7–23.

Khan I., Abdelsalam N.M., Fouad H., Tariq A., Ullah R. & Adnan M. 2014. Application of ethnobotanical indices on the use of traditional medicines against common diseases. *Evidence-Based Complementary and Alternative Medicine* 635371: 21.

Khatib C., Nattouf A. & Hasan Aga M.I. 2021. Traditional medicines and their common uses in central region of Syria: Hama and Homs – an ethnomedicinal survey. *Pharmaceutical Biology* 59: 776–786.

Kılıç M., Yıldız K. & Kılıç F.M. 2020. Traditional Uses of Medicinal Plants in Artuklu, Turkey. *Human Ecology* 48: 619–632.

Koca U., Küpeli-Akkol E. & Sekeroglu N. 2011. Evaluation of in vivo and in vitro biological activities of different extracts of *Cuscuta arvensis*. *Natural Product Communications* 6: 1433–1436.

Leick G. (ed.) 2002. *Mesopotamia: The invention of city*. Penguin Books, London.

Łuczaj Ł. & Emre G. 2025. Lords-and-Ladies (*Arum*) as food in Eurasia: A Review. *Plants* 14: 577.

Maleki T., Leonti M., Dal Cero M., Sonboli A. & Weckerle C.S. 2025. Kurdish ethnomedicine in the context of historic migration. *Journal of Ethnopharmacology* 339: 119132.

Mason S. & Nesbitt M. 2009. Acorns as food in Southeast Turkey: implications for prehistoric subsistence in Southwest Asia. In Fairbairn A. & Weiss E. (eds.). *From foragers to farmers*, 71–85. Oxbow Books, Oxford, England.

Mateo-Martín J., Benítez G., Gras A., Molina M., Reyes-García V., Tardío J., Verde A. & Pardo-de-Santayana M. 2023. Cultural importance, availability and conservation status of Spanish wild medicinal plants: Implications for sustainability. *People and Nature* 5: 1512–1525.

Mati E. & Boer H. 2011. Ethnobotany and trade of medicinal plants in the Qaysari Market, Kurdish Autonomous Region, Iraq. *Journal of Ethnopharmacology* 133: 490–510.

Mohammed F.S. & Akgül H. 2018. Ethnobotanical analysis of cultivated and indigenous plants in Duhok Province in Iraq. *Turkish Journal of Agriculture - Food Science and Technology* 6: 1191–1195.

Mosaddegh M., Naghibi F., Moazzeni H., Pirani A. & Esmaeili S. 2012. Ethnobotanical survey of herbal remedies traditionally used in Kohghiluyeh va Boyer Ahmad Province of Iran. *Journal of Ethnopharmacology* 141: 80–95.

Mükemre M., Behçet L. & Çakılcıoğlu U. 2015. Ethnobotanical study on medicinal plants in villages of Çatak (Van-Turkey). *Journal of Ethnopharmacology* 166: 361–374.

Nadiroğlu M., Behçet L. & Çakılcıoğlu U. 2019. An ethnobotanical survey of medicinal plants in Karlıova (Bingöl-Turkey). *Indian Journal of Traditional Knowledge* 18: 76–87.

Osterhoudt S., Eddens K.S., Abdulkhaliq Z.S., Eshaya Armia R., Mahdi H.S., Mohamood A. & Muhamed H. 2024. The role of wild plants in cultural restoration: community collaboration and engaged ethnobotany in the Nineveh Plains, Northern Iraq. *Economic Botany* 78: 109–125.

Özüdoğru B., Akaydın G., Erik S. & Yeşilada E. 2011. Inferences from an ethnobotanical field expedition in the selected locations of Sivas and Yozgat provinces (Turkey). *Journal of Ethnopharmacology* 137: 85–98.

Parada M., Carrió E., Bonet M.À. & Vallès J. 2009. Ethnobotany of the Alt Empordà region (Catalonia, Iberian Peninsula): plants used in human traditional medicine. *Journal of Ethnopharmacology* 124: 609–618.

Phillips O., & Gentry A.H. 1993. The useful plants of Tambopata, Peru: II. Additional hypothesis testing in quantitative Ethnobotany. *Economic Botany* 47: 33–43.

Pieroni A., Price L.L. (eds.). 2006. *Eating and healing: traditional food as medicine*. Haworth Press, Binghamton.

Pieroni A., Ahmed H.M. & Zahir H. 2017. The spring has arrived: traditional wild vegetables gathered by Yarsanis (Ahl-e Haqq) and Sunni Muslims in Western Hawraman, SE Kurdistan (Iraq). *Acta Societatis Botanicorum Poloniae* 86: 3519.

Pieroni A., Sõukand R., Amin H.I.M., Zahir H. & Kukk T. 2018. Celebrating multi-religious co-existence in Central Kurdistan: the bio-culturally diverse traditional gathering of wild vegetables among Yazidis, Assyrians, and Muslim Kurds. *Human Ecology* 46: 217–227.

Pieroni A., Vandebroek I., Prakofjewa J., Bussmann R.W., Paniagua-Zambrana N., Maroyi A, Torri L., Zocchi D.M., Dam A.T.K. & al. 2020. Taming the pandemic? The importance of homemade plant-based foods and beverages as community responses to COVID-19. *Journal of Ethnobiology Ethnomedicine* 16: 75.

Polat R. 2019. Ethnobotanical study on medicinal plants in Bingol (City center) (Turkey). *Journal of Herbal Medicine* 16:100–121.

Polat R., Çakılcıoğlu U. & Satıl F. 2013. Traditional uses of medicinal plants in Solhan (Bingol-Turkey). *Journal of Ethnopharmacology* 148: 951–963.

POWO. 2025. *Plants of the World Online*. Royal Botanic Gardens, Kew. Website: https://powo.science.kew.org/ [accessed: 2 April 2025].

RBG Kew. 2020. The state of the world's plants report—2020. Royal Botanic Gardens.

Robinson M.M. & Zhang X. 2011. *The world medicines situation 2011. Traditional medicines: Global situation, issues and challenges.* WHO, Geneva.

Scurlock J.A. 2014. *Sourcebook for ancient Mesopotamian medicine. Writings from the Ancient World* 36. SBL Press, Atlanta.

Sulaiman N., Pieroni A., Sõukand R. & Polesny Z. 2022. Food behavior in emergency time: Wild plant use for human nutrition during the conflict in Syria. *Foods* 11: 177.

Suman R. & Dhatwalia S.K. 2024. A comprehensive systematic review of plant species utilized for dental care management in Himachal Pradesh, India. *Ethnobotany Research and Applications* 28: 1–22.

Thomas E., Vandebroek I., Sanca S. & Van Damme P. 2009. Cultural significance of medicinal plant families and species among Quechua Farmers in Apillapampa, Bolivia. *Journal of Ethnopharmacology* 122: 60–67.

Trotter R.T. & Logan M.H. 1986. Informant consensus: A new approach for identifying potentially effective medicinal plants. *In* Etkin L.N. (ed.). *Plants in indigenous medicine and diet*: 91–112. Redgrave, Bedford Hill, New York.

Tuttolomondo T., Licata M., Leto C., Savo, V., Bonsangue G., Gargano M.L., Venturella G. & La Bella S. 2014. Ethnobotanical investigation on wild medicinal plants in the Monti Sicani Regional Park (Sicily, Italy). *Journal of Ethnopharmacology* 153: 568–586.

Tuzlacı E. 2016. *Traditional medicine guide to plants in Turkey: Traditional treatment with plants in Turkey*. Istanbul Medical Health and Publishing, Istanbul.

Tuzlacı E. & Doğan A. 2010. Turkish folk medicinal plants, IX: Ovacık. *Marmara Pharmaceutical Journal* 14: 136–143.

Vandebroek I., Pieroni A., Stepp J.R., Hanazaki N., Ladio A., Alves R.R.N., Picking D., Delgoda R., Maroyi A. & al. 2020. Reshaping the future of ethnobiology research after the COVID-19 pandemic. *Nature Plants* 6: 723–730.

Wang T., Li Q., Zhou Z., Liu J., Tao Y., Zhang Y., Zeng y., Zhang S. & Su J. 2024. Review of traditional uses, phytochemistry and pharmacology of Tibetan Medicine tangchong. *Journal of Ethnopharmacology* 319: 117129.

Yen F.-L., Wu T.H., Lin L.-T. & Lin C.-C. 2007. Hepatoprotective and antioxidant effects of *Cuscuta chinensis* against acetaminophen-induced hepatotoxicity in rats. *Journal of Ethnopharmacology* 111: 123–128.

Yeşil Y. & Akalın E. 2009. Folk medicinal plants in Kürecik area (Akçadağ/Malatya-Turkey). *Turkish Journal of Pharmaceutical Science* 6: 207–220.

Yeşil Y., Çelik M. & Yılmaz B. 2019. Wild edible plants in Yeşilli (Mardin-Turkey), a multicultural area. *Journal of Ethnobiology and Ethnomedicine* 15: 52.

Yeşil Y. & İnal İ. 2019. Traditional knowledge of wild edible plants in Hasankeyf (Batman Province, Turkey). *Acta Societatis Botanicorum Poloniae* 88: 3633.

Yeşil Y. & Inal I. 2021. Ethnomedicinal Plants of Hasankeyf (Batman-Turkey). *Frontiers in Pharmacology* 11: 624710.

Yeşilada E. 2013. An Overview of Turkish Folk Medicine; Past and Present. *Current Drug Delivery* 10: 1–4.

Yeşilli Municipality. 2025. Website: http://www.yesilli.bel.tr/ [accessed: 25 May 2024].

APPENDIX 1. Used parts, purposes and preparation methods of medicinal plants recorded in Yeşilli (Turkey) ordered by plant family and taxon.

†ISTE Herbarium of Faculty of Pharmacy, University of Istanbul, YP Yeşilli Project; *A* Arabic, *S* Syriac, *K* Kurdish; *Cultivated plants, ᵉEdible plants. ‡ Bold purposes and numbers indicate similar uses in the literature. **1**. Abdulwahid-Kurdi & al. 2022, **2**. Ahmad & Askari 2015, **3**. Ahmed 2016, **4**. Ahmed 2024, **5**. Akan & Ayaz 2016, **6**. Akan & al. 2013, **7**. Akgül & al. 2018, **8**. Altundağ 2009, **9**. Arasan & Kaya 2015, **10**. Bahmani & al. 2012, **11**. Balos & al. 2022, **12**. Baykan & al. 2023, **13**. Bulut & al. 2016, **14**. Bulut & al. 2019, **15.** Çakılcıoğlu & al. 2011, **16**. Çakılcıoğlu & Türkoğlu 2010, **17**. Demir 2020, **18**. Demir & Demir 2022, **19**. Doğan 2024, **20**. Gençay 2007, **21**. Güneş & Özhatay 2011, **22**. Hayta & al. 2014, **23**. Hosseini & al. 2021, **24**. Karakaya & al. 2019, **25**. Karakaya & al. 2020, **26**. Kaval & al. 2014, **27**. Kawarty & al. 2020, **28**. Kaya & al. 2020, **29**. Khatib & al. 2021, **30**. Kılıç & al. 2020, **31**. Maleki & al. 2025, **32**. Mati & Boer 2011, **33**. Mohammed & Akgül 2018, **34**. Mosaddegh & al. 2012, **35**. Mükemre & al. 2015, **36**. Nadiroğlu & al. 2019, **37**. Polat 2019, **38**. Polat & al. 2013, **39**. Tuzlacı & Doğan 2010, **40**. Yeşil & Akalın 2009, **41**. Yeşil & İnal 2021.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Amaryllidaceae							
*ᵉ*Allium cepa* L.	Basal (A), Basle (S), Pîvaz (K)	Bulbs	Onion juice, direct	Eardrop	Earache, tinnitus	0.36	1, 9, 12, 16, 20 22, 24, 25, 29, 31, 36, 38, 40, 41
		Bulbs	Fresh	Eaten	**Blood pressure**	0.48	**4, 9, 12, 17, 22, 24, 25, 29, 32, 36-38**; 3, 9, 12, 16, 22, 25, 29, 31, 32, 33, 41
Anacardiaceae							
ᵉ*Rhus coriaria* L. ISTE 115280	Sımaq (A, K), Tirş (K), Hamsit'o (S)	Aerial parts	Decoction	Gargle with salt	**Mouth cleaning, toothache**	0.23	**9, 15, 16, 19, 41**; 1, 4, 9, 12, 15, 20, 27, 32, 37, 38, 41
		Aerial parts	Decoction	Internal	**Mouth sore**	0.23	**9, 15, 16, 19, 41**; 1, 4, 9, 12, 15, 20, 27, 32, 37, 38, 41
ᵉ*Pistacia terebinthus* L. ISTE 115944	Benk (K), Bıttım (A, K), Şigore (S)	Resin (Benuşt)	Fresh	Eaten	**Digestion problems**	0.29	**16, 22**; 7, 15, 16, 22, 38, 41
Apiaceae							
*ᵉ*Anethum graveolens* L. ISTE 115238	Dere otu (T), Dehlê (S)	Fruits	Infusion	Internal	Carminative, stomachache,	0.21	13, 27
*ᵉ*Coriandrum sativum* L. ISTE 115237	Gişnîş (K), Kızbara (A), Kesbert'o (S)	Fruits	Infusion	Internal	**Carminative, stomachache**	0.23	**9, 23, 30**; 9, 23, 30
ᵉ*Geocaryum macrocarpum* (Boiss. & Spruner) Engstrand ISTE 115681	Ceviz il arz (A), Gûzê ardê (K)	Tubers	Fresh, after peeling off the outer part	Eaten	Anticancer, immunostimulant	0.02	-
ᵉ*Eryngium creticum* Lam. ISTE 115230	Beektire (S-A), Ekkeyde (A), Kerenge eto (K)	Aerial parts	Infusion	Internal	Cold, flu, pollinosis, upper **respiratory infections**	0.08	**29**; 29
		Aerial parts, seeds	Decoction (with *Urtica* sp. and honey)	Internal	Anticancer, hemorrhoids	0.08	**29**; 29
		Aerial parts, seeds	Decoction (with *Urtica* sp. and honey)	Internal	Anticancer, hemorrhoids	0.08	**29**; 29

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
		Stems	Fresh, after peeling off the outer part	Eaten	Diabetes	0.08	**29**; 29
*[*e]*Petroselinum crispum* (Mill.) Fuss.	Bağdenoz (A, K, S)	Petiole	Decoction	Internal	**Abdominal pain,** carminative	0.12	**12, 36**; 1, 3, 12-14, 17, 23, 29
*[*e]*Pimpinella anisum* L. YP4	Anason, Anesûn (K), Yesun (A, S)	Fruits	Infusion (breastfeeding mothers drink two-three times a day on a full stomach)	Internal	Galactagogic	0.13	1, 32, 41
Araceae							
[e]*Arum rupicola* Boiss. ISTE 116014	Kardi (K)	Leaves	Infusion (with *Rhus coriaria*) (three times once a day)	Internal	Abdominal pain, purgative, rheumatism	0.82	**30, 41;** 11, 17-19, 24, 25, 30, 36, 40, 41
		Leaves	Cooked as meal	Internal	Knee pain**, rheumatism**	0.82	**30, 41;** 11, 17-19, 24, 25, 30, 36, 40, 41
		Leaves	Crashed	External	Paralytic person, **rheumatism**	0.82	**30, 41;** 11, 17-19, 24, 25, 30, 36, 40, 41
Asteraceae							
Achillea arabica Kotschy ISTE 115301	Kulilka Maran (K), Sfaysara (A)	Capitula	Infusion	Internal	**Abdominal pain**, **carminative**, **menstrual pain**, shoulder pain	0.13	**8, 9, 24, 31, 37-39, 40**; 8, 9, 12, 17, 18, 24, 25, 31, 36-41
		Capitula	Infusion (two droops with breast milk)	Internal	**Carminative**, child development, **painkiller**	0.13	**8, 9, 24, 31, 37-39, 40**; 8, 9, 12, 17, 18, 24, 25, 31, 36-41
Achillea santolinoides Lag. ISTE 115320	Kulilka Maran (K), Sfaysara (A)	Capitula	Infusion	Internal	**Abdominal pain**, **carminative**, **child development**, menstrual pain, painkiller, shoulder pain	0.52	**8, 22, 23, 30, 31**; 8, 10, 15, 16, 23, 30, 31, 34
[e]*Chondrilla juncea* L. ISTE 115248	Talî (K)	Latex	Dried	Chewing	**Digestive**	0.09	**12**; 12, 41
Cota austriaca (Jacq.) Sch.Bip. ISTE 115726	Beybûn, Beybenûç (A, K), Beybune (S), Kulilka kahvan (K)	Aerial parts	Infusion	Internal	**Analgesic**, **antitussive,** antispasmodic, carminative, **cold,** diabetes, **flu,** menstrual disorders, **shortness of breath**, stomachache	0.28	**19, 41**
		Aerial parts	Decoction	Internal	**Tuberculosis**	0.28	**19, 41**
[e]*Gundelia tournefortii* L. ISTE 115711	Arkue (A), Ergudê (S), Kereng, Herşew (K)	Young stems	Fresh, after peeling off the outer part	Eaten	**Diabetes**	0.23	**1, 22, 39**; 1, 4, 5, 9, 15, 19, 22-25, 27, 34, 36, 38

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Matricaria aurea (Loefl.) Sch.Bip. ISTE 115673	Beybûn, Beybenûç, Giyayeseva, Gihaseva (K)	Aerial parts	Infusion	Internal	**Carminative**, menstrual disorders	0.29	**41;** 9, 30, 41
[e]*Onopordum illyricum* L. subsp. *illyricum* ISTE 116442	Kelbeş, Kerbeş (K)	Seeds	Powdered, then 1 teaspoon directly or mixed with molasses or honey, on an empty stomach	Internal	**Haemorrhoids**	0.04	**9, 12, 17, 30**; 9, 12, 17, 30
		Young stems	Fresh, after peeling off the outer part	Eaten	Anaemia	0.04	**9, 12, 17, 30**; 9, 12, 17, 30
Boraginaceae							
[e]*Anchusa strigosa* Banks & Sol. ISTE 115311	Hımhım (A), Gûrîz (K)	Leaves	Crushed	External	Against arthrolith, healing wounds, **mouse bit,** rheumatism, **snakebit**	0.59	**9;** 7, 9, 38, 41
		Aerial parts	Infusion	Internal	**Edema dispenser**, painkiller, **weightloss**	0.59	**9;** 7, 9, 38, 41
[e]*Echium italicum* L. ISTE 115234	Hımhım (A), Mijok (K)	Leaves	Cooked	Internal	**Edema dispenser**	0.12	**15**; 16, 17
Brassicaceae							
*[e]*Brassica rapa* L.	Şellime (K)	Whole parts	Cooked as meal	Internal	Anticancer, diabetes	0.07	-
Hirschfeldia incana (L.) Lagr. -Foss. ISTE 115307	Xerdel (K, A), Hardlo (S)	Young aerial parts	Fresh	Eaten	Hemorrhoids	0.04	-
[e]*Nasturtium officinale* R. Br. ISTE 115903	Kazeyağli (A), Qıcce (A), Tûzik (K)	Aerial parts	Fresh	Eaten	Hair loss, iron deficiency	0.32	1, 3, 4, 9, 14, 27, 34, 37, 38, 41
[e]*Sinapis alba* L. subsp. *alba* ISTE 115317	Xerdel (A, K)	Aerial parts	Fried in oil	External	**Rheumatism**	0.08	**1**; 41
Cannabaceae							
[e]*Celtis tournefortii* Lam. ISTE 115304	Gernoso (S), Gıngırêz (A), Teêv, Tuêv (K)	Seeds	Decoction (1 tea cup, day/night)	Internal	**Antidiarrheal**, **antitussive, bronchitis**, **tuberculosis**	0.18	**1, 4, 9, 18, 19, 27, 30, 37-39, 41**; 9, 22, 30, 37, 38, 41
		Fruit	Ripe fruits, roasted and crushed and added to molasses	Eaten	Dizziness, headache, **immunostimulant**	0.18	**1, 4, 9, 18, 19, 27, 30, 37-39, 41**; 9, 22, 30, 37, 38, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Convolvulaceae							
Cuscuta babylonica Aucher ex Choisy var. *babylonica* ISTE 115695	Caye şırta (K), Ikşut (A)	Whole parts	Infusion	Internal	**Cardiac disease**, cold, icterus, galactagogic, shoulder pain	0.21	**41;** 30
Cucurbitaceae							
[e]*Bryonia aspera* Steven ex Ledeb. ISTE 115707	Reskurewik (K)	Roots	Dried and powdered infusion	Eaten	**Diabetes**	0.43	**41**
		Roots	Dried and powdered infusion	Internal	**Diabetes**	0.43	**41**
[*e]*Cucurbita pepo* L.	Kundir (K), Karî(A), Karê (S)	Fresh seeds	Fresh with honey or molasses	Eaten on an empty stomach	**Anthelmintic**	0.15	**9**; 21, 33
Ecballium elaterium (L.) A.Rich. ISTE 117525	Zirindar, Zırındar (K)	Fruit juice	Mixed with lemon juice (1–3 drops)	Nasal drop	**Sinusitis**	0.10	**7, 9, 12, 28-30;** 9, 28, 29, 30
Cupressaceae							
Juniperus oxycedrus L. ISTE 117526	Hevrêz (K), Dıfran (A, S)	Crushed fruits	Decoction (1 spoon for children, 2 spoons for adult a day)	Internal	**Cold**	0.09	**7, 12, 36, 41**; 12, 16, 19, 21, 36
Cyperaceae							
[e]*Cyperus longus* L. YP6	Şeqilarab (A), Şînêrek (K)	Cormus	Fresh	Eaten	**Diabetes**	0.11	**20**; 19
Elaeagnaceae							
[e]*Elaeagnus angustifolia* L. ISTE 115235	Sinc (K)	Flowers	Infusion	Internal	Headache	0.02	8, 18, 22, 37
		Flowers	Smell	Inhalation	Headache	0.02	8, 18, 22, 37
Fabaceae							
[e]*Glycyrrhiza glabra* L. ISTE115 272	Meyan, Sus, Sûs (A, K)	Roots	Maceration, (prepared as syrup)	Internal	**Refreshment, stomachache**	0.68	**1, 3, 6, 12, 28, 29, 33, 37**; 1, 3, 4, 6, 12, 19, 20, 22, 24, 26-33, 37, 41
Trigonella sp. ISTE 117527	Indiko, Indako (K)	Whole parts	Direct	Smell	Relaxing	0.01	-
Prosopis farcta (Banks & Sol.) J.F.Macbr. ISTE 115298	Heshesuk, Xışxışok (K), Xernub (A)	Fruits	Infusion	Internal	**Diabetes**, **gastritis**, **ulcer**, weight loss	0.38	**1, 32, 41;** 1, 9, 20, 30, 32, 41
		Fruits	Powdered	Eaten	**Diabetes, gastritis, stomach disorders, ulcer and**	0.38	**1, 32, 41;** 1, 9, 20, 30, 32, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Fagaceae							
[e]*Quercus brantii* Lindl. ISTE 115508	Berûq, Berû (K), Balot (A), Balutê (S)	Immature fruits	Fresh	Eaten	**Diabetes**	0.56	**4, 7, 9, 18, 27, 30, 41**; 1, 4, 9, 10, 12, 17, 27, 30, 34
		Fruits	Cooking in embers	Eaten	**Diabetes**	0.56	
Hypericaceae							
Hypericum triquetrifolium Turra ISTE 115263	Aran (A), Botav (K)	Aerial parts	Infusion (1 tea cup a day)	Internal	Antifatigue, **cardiotonic**, **diabetes**, **eczema,** nasal congestion, **painkiller,** rheumatism, shortness of breath, **stomach disorders**	0.58	**6**, **7, 9, 20, 28, 30, 41**
		Aerial parts	Burn	External	**Eczema**		
		Aerial parts	-	Inhalation	Nasal congestion		
		Whole parts	Infusion (1 tea cup a day, 10 days)	Internal	Antifatigue, arthralgia (calcinosis), **cardiotonic**, rheumatism, **stomach disorders,** shortness of breath		
			Decoction	Internal	Shortness of breath		
Juglandaceae							
[e]*Juglans regia* L. ISTE 115679	Cevz (A), Gewzê (S), Guz (K)	Fruit barks	Fresh, crushed	External	**Painkiller, scorpion sting, snakebite**	0.09	**9, 18;** 1, 2, 4, 5, 9, 12, 15, 17, 18, 19, 22, 24, 25, 26, 27, 29, 30-32, 33, 34-40
	Cevz (A), Gewzê (S), Guz (K)	Fruits	Fresh	Eaten	**Headache**	0.09	**9, 18;** 1, 2, 4, 5, 9, 12, 15, 17, 18, 19, 22, 24, 25, 26, 27, 29, 30-32, 33, 34-40
Lamiaceae							
[e]*Mentha longifolia* (L.) L. ISTE 115246	Nahne, Nınha (A), Pûng (K)	Leaves	Infusion	Internal	**Antitussive, expectorant**	0.53	**12, 13, 19, 21, 22, 24, 28, 30, 31, 36-39, 41;** 4, 9, 10, 12-16, 19, 20-25, 30, 31, 36-40
		Dried aerial parts	Decoction	Internal	**Antitussive**, **cold,** nasal flow, **shortness of breath**		
		Dried aerial parts	Decoction	Internal	**Antitussive**, **cold**, **expectorant**, diuretic, **flu**, vasodilator		
		Aerial parts	Infusion	Internal	**Antitussive**, **cold**		
[*e]*Mentha* x *piperita* L.	Nahne, Nınha (A), Pûng (K)	Dried aerial parts	Infusion	Internal	**Antitussive**, **cold**, expectorant	0.50	**9, 14, 30, 34**; 1, 3, 30, 31

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Salvia multicaulis Vahl ISTE 115689	Ceybılarus (A)	Aerial parts	Decoction	Internal	Headache		7, 9, 12, 30, 41
Teucrium polium L. ISTE 115287	Chabo, Bojnak, Gihabo (K), Cehde, Cûdê (A)	Aerial parts	Infusion	Internal	**Analgesic** (especially in internal illness), antispasmodic, **antitussive, cardiotonic**, **carminative, cold, diabetes**, **flu**, **stomach ulcer**, **stomachache**, **gastritis**, shoulder pain, somniferous	0.51	**6, 8, 9, 12-19, 22, 25, 26, 30, 31, 34-41**; 9, 14, 15, 16-19, 21, 24, 30, 31, 34, 35, 37, 38, 40, 41
		Whole parts	Infusion	Internal	**Gastritis,** jaundice, **ulcer**		
		Roots	Crushed	External	**Rheumatism**		
		Seeds	Crushed	Internal	**Diabetes**		
[e]*Thymbra sintenisii* Bornm. & Azn. ISTE 115690	Cehter, Cahter (K), Zahter (A)	Dried aerial parts	Powdered plus honey	Internal	Nausea	0.32	**9;** 7, 9, 14, 30, 41
			Infusion	Inhalation	Sinusitis		
			Infusion (1 tea cup a day)	Internal	Constipation		
[e]*Thymbra spicata* L. subsp. *spicata* ISTE 115700	Cehter, Cahter (K), Zahter (A)	Dried aerial parts	Infusion	Internal	**Cold,** nausea	0.33	**41**; 12
Liliaceae							
[e]*Gagea villosa* (M.Bieb.) Sweet ISTE 116418	Şeqılarab (A), Şînêrak (K)	Cormus	Fresh, after peeling off the outer part	Eaten	Diabetes	0.04	-
Malvaceae							
Alcea setosa (Boiss.) Alef. ISTE 115240	Hîro, Hiroj (K), Xêtmî (A, K)	Flowers	Decoction (1 tea or water cup /adult, 1 tablespoon / breastfed child a day)	Internal	**Antitussive**, **asthma, bronchitis**, cold, flu, **shortness of breath**	0.42	**7, 41**; 7, 12, 18, 41
		Dried flowers	Infusion	Internal	Kidney stone		
		Roots	Decoction	Internal	Kidney stone		
[e]*Malva neglecta* Wallr. ISTE 115302	Xıbbezê (A), Tolig, Tolik (K)	Aerial parts	Decoction	External	**Rheumatism**	0.55	**21, 24, 25, 35, 36**; 7-9, 12, 13, 16-20, 22, 24-26, 30, 35-38, 40, 41
[e]*Malva nicaeensis* All. ISTE 115239	Xıbbezê (A), Tolig, Tolik (K)	Aerial parts	Crushed	External	Removing inflammation	0.54	35, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Moraceae							
[e]*Ficus carica* subsp. *carica* L. ISTE 115943	Hejîr (K), Tin (A), Tinê (S)	Dried or fresh fruits	Direct	Eaten	**Intestinal disorders, laxative**, **stomach** disorders	0.12	**1, 12, 22, 41**; 1, 5, 12, 24, 30, 41
[e]*Ficus carica* subsp. *rupestris* (Hausskn.) Browicz ISTE 115699	Hejire çiya (K)	Dried or fresh fruits	Direct	Eaten	Intestinal disorders, laxative, stomach disorders	0.06	9, 17, 29, 39, 40
*[e]*Morus alba* L.	Tut, Tu (K), Tuŝ (A)	Fruits	Fresh	Eaten	Antitussive**, stomach disorders**	0.21	**1, 9, 15, 22, 23, 25, 31**; 1, 33
*[e]*Morus nigra* L. ISTE 115281	Tuŝe şemi, Tûya reş (K)	Leaf buds	Fresh	Eaten	Cholesterol, **diabetes**	0.12	**12, 33**; 12, 17, 24, 25, 33, 37, 38, 41
*[e]*Morus rubra* L.	Tûsor (K), Tuŝ xelabi (A)	Fruit	Fresh	Eaten	Intestinal and stomach disorders	0.09	-
Oleaceae							
*[e]*Olea europaea* L. ISTE 115262	Zeitûn (A, K, S)	Fresh fruits	Fresh	Eaten	**Diabetes**	0.18	**1, 3, 9, 12, 29, 32;** 9, 24, 29, 31, 33, 34, 41
		Dried leaves	Decoction	Internal	**Diabetes**		
		Oil	-	External	Knee pain		
		Leaves	Fresh	Chewing, putted on tooth	**Toothache**		
Papaveraceae							
[e]*Papaver glaucum* Boiss. & Hausskn. ISTE 115286	Kulîlka bûk û zava, Kulîlka nisanê, Kulîlka ereba (K), Qırçeh (A)	Dried flowers	Powdered	External	Hemostatic (especially nosebleed)	0.09	-
		Dry fruit	Powdered mixed with breast milk (1-2 droops a day)	Internal	Cold, flu		
		Dry fruit	Powdered mixed with breast milk (1-2 droops a day)	Eardrop	Earache		
		Whole parts	Decoction (as droops during 5 days)	Internal	Antitussive		
[e]*Papaver macrostomum* Boiss. & A.Huet ISTE 115680	Kulîlka nisanê (K)	Fresh young leaves	Crushed	External	Knee pain	0.07	40, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
Platanaceae							
[*]Platanus orientalis L. ISTE 115297	Çinar, Çinayêr (A)	Leaves	Infusion	Internal	**Cardiac problems**, **osteoarthritis**, rheumatism, varicose vein	0.07	**9, 22, 25, 30, 41**; 9, 12, 17, 25, 30, 41
Poaceae							
[*]Hordeum vulgare L. YP5	Ceh (K), Sôre (S), Şîr (A)	Fruit	Decoction	Internal	Antiinflammatory, edema bleeder, headache, diabetes, kidney stone	0.15	9, 16, 19, 22, 24, 25, 41
			Flour with eggs	External	Arthralgia, painkiller		
Portulacaceae							
[e]*Portulaca oleracea* L. ISTE 115241	Parparık, Pirpare (K), Pirpar (A, K)	Aerial parts	Decoction	Internal	Antiinflammatory, **antipyretic**, **heatstroke**, increase in blood circulation	0.09	**29, 30**; 1, 4, 9, 13, 14, 16, 19, 20, 22, 27, 29, 30, 34, 36, 37-39, 41
Punicaceae							
*[*e]*Punica granatum* L. ISTE 115676	Hinar (K)	Fruits	Eaten raw	Internal	*Blood purifier,* **digestion problems**, **intestinal disorders**	0.13	**1, 3, 5, 9, 12, 20, 27, 31, 33, 41;** 1, 12
		Fruit bark	Eaten raw	Internal	**Antidiarrheal**		
		Fruit bark	Raw or boiled	Internal	**Antidiarrheal**		
Rhamnaceae							
Paliurus spina-christi Mill. ISTE 115289	Diriyê çali, Durihışhışok, Xışxışok (K), Mğelin (A), Ôlê (S)	Branches and roots	Kept on fire, flowing sap	External	**Skin disease**, wart, wound healing	0.11	**2, 4, 7, 9, 15, 16, 19, 26, 27, 30, 37, 41**; 12
		Dried fruits	Decoction (1 tea cup a day)	Internal	**Kidney stone**		
		Leaves	Decoction (1 tea cup a day)	Internal	**Gastritis**		
Rosaceae							
[e]*Crataegus azarolus* L. var. *azarolus* ISTE 115507	Givîj, Gîjok, Gûhîj (K), Ğızran (A)	Leaves	Decoction	Internal	**Kidney stone, shortness of breath**	0.08	**3, 9**; 3, 8, 9, 20, 22, 29-31, 37, 38
*[*e]*Cydonia oblonga* Mill.	Bihok (K), Seferglê (S), Sfercel (A)	**Exocarp of peeled fruits,** barks of fruit stalk	Infusion (1 tea cup, day/ night)	Internal	**Bronchitis**	0.03	**12, 36-38**; 4, 7, 9, 27, 37, 38, 41
		Fruits	Fresh	Eaten	Constipation		
*[*e]*Prunus amygdalus* Batsch ISTE 115305	Behîv, Beru (K), Firt (A), Luzê (S)	Immature fruits	Fresh	Eaten	**Diabetes**	0.14	**31**; 2, 9, 12, 15, 16, 22, 31, 32, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
[e]*Prunus argentea* (Lam.) Rehder ISTE 117528	Behîve eşk, Beyîfe bejî (K), Fırtızıb (A)	Dried seeds	Direct	Eaten	**Diabetes**	0.02	**12, 17, 28, 30, 41**; 17, 30
*[ec]*Prunus armeniaca* L.	Heruk (K)	Dried flowers	Decoction (half a cup, with milk)	Internal	Antitussive, shortness of breath	0.11	**9;** 9, 12, 29, 35, 37, 40
		Dried or fresh fruits	Direct	Eaten	**Digestive problems**		
		Dried or fresh fruits	Decoction	Internal	Postnatal inflammation		
*[e]*Prunus avium* (L.) L. ISTE 115303	Qeras (K), Keraz (S), Qerasiye (A)	Fruit stalks	Decoction (1 tea cup a day, children)	Internal	Bronchitis	0.05	9, 23, 37
*[e]*Prunus cerasus* L. ISTE 115229	Wişna (K), Mahlep (A)	Fruit stalks	Decoction	Internal	Antitussive, diabetes	0.10	21
		Fruits	Infusion	Internal	Cold, heatstroke		
[e]*Prunus mahaleb* L. ISTE 115684	Kenêr, Kinêrek, Qinêr (K), Mahlab (S), Mahlep, Mahleb (A, K)	Fruit stalks, seeds	Decoction	Internal	**Antitussive**	0.21	**7, 9, 15, 16, 19, 22, 30, 32, 36**; 9, 30
		Leaves	Direct	Internal	**Antitussive, diabetes**, **shortness of breath**		
		Dried seeds	Decoction	Internal	**Diabetes**		
		Fruits (with powdered *Mentha* sp.)	Decoction	Internal	**Cold,** heatstroke		
[e]*Prunus microcarpa* C.A.Mey. ISTE 116179	Bilalûk (K), Fıkt (A)	Fruits	Decoction	Internal	Analgesic, **antidiarrheal, digestion problems**	0.11	**1, 4, 27, 33**; 2, 10, 19, 30, 31, 34
*[e]*Prunus persica* (L.) Batsch	Çeftelî, Xox (K), Xaux (A), Xauxê (S)	Dried seeds	Crushed then mixed with breast milk	Eardrop	**Earpain**	0.02	**41**; 1, 9, 20
[e]*Rosa canina* L. ISTE 115300	Gulşilav, Şilav (K), Verde (S), Verdeniî (A)	Flowers	Infusion	Internal	**Constipation**	0.35	**1, 3, 8, 9, 12, 15-19, 21, 22, 24-26, 31, 35-38-41;** 1, 2, 8, 9, 12, 15-19, 21-26, 31, 34-41
		Seeds, fruits	Decoction	Internal	Anticancer, **bronchitis, cold**, **urinary tract infection**		

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
[e]*Rosa foetida* Herrm. ISTE 115319	Gulizerk, Gulşîlave zer (K), Verdasfar (A)	Fruits	Infusion	Internal	Headache	0.04	**7**; 7, 24, 30, 31
		Fruits	Decoction	Internal	**Anticancer**		
		Petals	Infusion	Internal	Antispasmodic		
[e]*Rubus sanctus* Schreb. ISTE 115720	Dirîreşik (K), Alleq (A)	Fruits	Fresh	Eaten	Heartburn	0.06	**9, 12, 30, 41**; 4, 9, 12, 15, 22, 27, 30, 37, 38, 41
		Roots	Infusion	Internal	**Anticancer**, antifungal, **antiinflammatory**, antipyretic, **kidney problems**		
Salicaceae							
[*]*Populus nigra* L. ISTE 115231	Hevr (A), Spindar (K)	Branches	Fresh	Chewing	**Diabetes**	0.04	-
Salix alba L. ISTE 116126	Bî (K), Ğarap (A), Xos (A)	Leaves	Maseration	External (a cloth is soaked in water and this is applied to the body of children or babies)	**Antipyretic**	0.05	**23-25;** 1, 3, 22-26, 33, 37, 38, 41
	Bî (K), Ğarap (A), Xos (A)	Leaves	Decoction	External	**Heatstroke**		
Salix triandra L. YP8	Bî (K), Ğarap (A), Xos (A)	Leaves	Putted in cold water	External (soaked cloth applied to the body of children or babies)	Antipyretic	0.04	-
	Bî (K), Ğarap (A), Xos (A)	Leaves	Decoction	External	Heatstroke		
Hyoscyamus albus L. ISTE 115274	Benc, Kovikê şivanan, Kovikê bizînan, Pele pence (K)	Seeds and leaves	Burned	Holding the ear towards the smoke	**Earache** (babies too)	0.10	**41**; 41
	Benc, Kovikê şivanan, Kovikê bizînan, Pele pence (K)	Flower buds	Crushed and mixed with breast milk	Eardrop	**Earache** (babies too)		
Urticaceae							
[e]*Urtica dioica* L. ISTE 115253	Gezgezik, Gezgezok (K), Kırays (A)	Aerial parts	Infusion	Internal	**Anticancer**, **antitussive**, **diabetes**, **painkiller**, **prostate**, **rheumatism, stomachic**		**4, 5, 7- 9, 12, 15-17, 19-24, 26-30, 34-41;** 1, 3, 8, 9, 12, 15-20, 22, 23-27, 29, 30, 34-39, 41

APPENDIX 1. Cont'd.

Taxon / Voucher	Local names†	Used parts	Preparations	Methods	Purposes	UV	Previous literature records‡
	Gezgezik, Gezgezok (K), Kırays (A)	Aerial parts	Direct	External	**Rheumatism**		
[e]*Urtica pilulifera* L. ISTE 115296	Gezgezik, Gezgezok (K), Kırays (A)	Aerial parts	Infusion	Internal	**Anticancer**, **diabetes**, painkiller, **rheumatism**	0.17	**28, 41;** 28, 29, 32, 41
			Direct	External	Rheumatism		
Vitaceae							
[*e]*Vitis vinifera* L. ISTE 115260	Tirî (K), Messek (A)	Fruits	Vine (1/2 tea cup)	Internal	**Antitussive,** flu, **weakness**	0.02	**29, 41**; 9, 12, 19, 22, 23, 29, 30, 35, 36, 41
Zygophyllaceae							
Tribulus terrestris L. ISTE 115259	Qurincık, Qurimçek (K)	Aerial parts	Decoction	Internal	**Kidney stone**, painkiller	0.23	**3, 4, 9, 23, 27, 30, 37, 38**; 3-5, 9, 12, 15, 22, 27, 30, 37, 38, 41
Graphidaceae							
Diploschistes sp. YP10	Xenetik, hınatitk (K)	Whole parts	Powder	External	Against diaper rash, dying hairs and hands	0.36	-